

Application No. 09/845,985

SUMMARY OF THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Previously presented) A collection of particles comprising a crystalline composition with a phosphate anion and a lithium cation, the collection of particles having an average particle size less than about 1000 nm and having essentially no particle with an diameter greater than about 5 times the average particle size.
2. (Original) The collection of particles of claim 1 having an average particle size from 5 nm to about 250 nm.
3. (Original) The collection of particles of claim 1 having an average particle size from 5 nm to about 100 nm.
4. (Original) The collection of particles of claim 1 having a plurality of metals in the composition.
5. (Canceled)

Application No. 09/845,985

6. (Original) The collection of particle of claim 1 having at least three metals within the composition.
7. (Original) The collection of particles of claim 1 wherein the composition comprises Li_xFePO_4 , $0.1 \leq x \leq 1$.
8. (Original) The collection of particles of claim 1 wherein the composition comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, $0 \leq x \leq 0.8$.
9. (Original) The collection of particles of claim 1 wherein the composition comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, $0.4 \leq x \leq 0.8$.
10. (Original) The collection of particles of claim 1 wherein the composition comprises M_xPO_4 , wherein M is a metal, x is a rational number and $x \leq 4$.
11. (Canceled)
12. (Previously presented) The collection of particles of claim 21 wherein the composition comprises FePO_4 .
13. (Canceled)
14. (Original) The collection of particles of claim 1 having essentially no particle with an diameter greater than about 3 times the average particle size.

Application No. 09/845,985

15. (Original) The collection of particles of claim 1 having a distribution of particle sizes such that at least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.
16. (Original) A battery comprising an cathode, the cathode comprising the collection of particles of claim 1, the particles comprising lithium metal phosphate.
17. (Previously presented) The battery of claim 16 wherein the lithium metal phosphate comprises Li_xFePO_4 , $0.1 \leq x \leq 1$.
18. (Original) The battery of claim 16 wherein the lithium metal phosphate comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, where $0.6 \leq x \leq 0.8$.
19. (Original) The battery of claim 16 comprising an anode having lithium metal.
20. (Original) The battery of claim 16 comprising an anode having a lithium intercalation compound.
21. (Previously presented) A collection of particles comprising a collection of amorphous particles, the particles comprising a phosphate composition having an average particle size less than about 95 nm and having essentially no particle with an diameter greater than about 5 times the average particle size.
- 22-47. (Canceled)

Application No. 09/845,985

48. (Previously Presented) The collection of particles of claim 21 having a plurality of metals in the composition.
49. (Previously Presented) The collection of particle of claim 21 having at least three metals within the composition.
50. (Previously Presented) The collection of particles of claim 21 wherein the composition comprises lithium.
51. (Canceled)
52. (Previously Presented) The collection of particles of claim 21 having essentially no particle with an diameter greater than about 3 times the average particle size.
53. (Previously Presented) The collection of particles of claim 21 having a distribution of particle sizes such that at least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.
54. (Previously Presented) The collection of particles of claim 21 wherein the phosphate composition comprises AlPO_4 or $\text{Ca}_3(\text{PO}_4)_2$.
55. (Previously presented) A collection of particles comprising a crystalline composition with a phosphate anion and a lithium cation, the collection of particles having an average particle size less than about 1000 nm and having a distribution of particle sizes such that at

Application No. 09/845,985

least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.

56. (Previously presented) The collection of particles of claim 55 having an average particle size from 5 nm to about 100 nm.

57. (Previously presented) The collection of particles of claim 55 having a plurality of metals in the composition.

58. (Previously presented) A collection of particles comprising a collection of amorphous particles, the particles comprising a phosphate composition having an average particle size less than about 95 nm and having a distribution of particle sizes such that at least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.

59. (Previously presented) The collection of particles of claim 58 having an average particle size from 5 nm to about 100 nm.

60. (Previously presented) The collection of particles of claim 58 having a plurality of metals in the composition.

61. (Previously presented) The collection of particle of claim 58 wherein the phosphate composition comprises AlPO_4 or $\text{Ca}_3(\text{PO}_4)_2$.